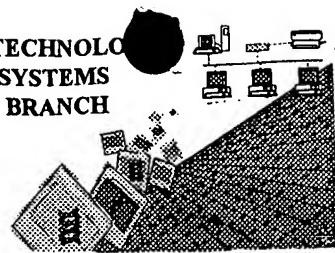


BIOTECHNOLOGY  
SYSTEMS  
BRANCH



## RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/516,837  
Source: PGT/IO  
Date Processed by STIC: 12/12/04

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS; PLEASE USE THE CHECKER VERSION 4.2 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm>), EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 06/05/04):  
U.S. Patent and Trademark Office, 220 20<sup>th</sup> Street S., Customer Window, Mail Stop Sequence, Crystal Plaza Two, Lobby, Room 1B03, Arlington, VA 22202

Revised 05/17/04

## Raw Sequence Listing Error Summary

**ERROR DETECTED**
**SUGGESTED CORRECTION**
**SERIAL NUMBER:** 10/516,837

**ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE**

- |    |   |   |
|----|---|---|
| 1  | <input type="checkbox"/> Wrapped Nucleic<br><input type="checkbox"/> Wrapped Aminos | The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."  |
| 2  | <input type="checkbox"/> Invalid Line Length  | The rules require that a line not exceed 72 characters in length. This includes white spaces.   |
| 3  | <input type="checkbox"/> Misaligned Amino Numbering                                 | The numbering under each 5 <sup>th</sup> amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.   |
| 4  | <input type="checkbox"/> Non-ASCII  | The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.  |
| 5  | <input type="checkbox"/> Variable Length  | Sequence(s) _____ contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.  |
| 6  | <input type="checkbox"/> PatentIn 2.0<br>"bug"                                      | A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.   |
| 7  | <input type="checkbox"/> Skipped Sequences<br>(OLD RULES)                           | Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence:<br>(2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)<br>(i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)<br>(ii) SEQUENCE DESCRIPTION: SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)<br>This sequence is intentionally skipped<br><br>Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences. |
| 8  | <input type="checkbox"/> Skipped Sequences<br>(NEW RULES)                           | Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence.<br><210> sequence id number<br><400> sequence id number<br>000  |
| 9  | <input type="checkbox"/> Use of n's or Xaa's<br>(NEW RULES)                         | Use of n's and/or Xaa's have been detected in the Sequence Listing.<br>Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.<br>In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.  |
| 10 | <input type="checkbox"/> Invalid <213><br>Response                                  | Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence   |
| 11 | <input type="checkbox"/> Use of <220>   | Sequence(s) _____ missing the <220> "Feature" and associated numeric identifiers and responses.<br>Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.<br>(See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)   |
| 12 | <input type="checkbox"/> PatentIn 2.0<br>"bug"                                      | Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.   |
| 13 | <input type="checkbox"/> Misuse of n/Xaa  | "n" can only represent a single nucleotide; "Xaa" can only represent a single amino acid  |



PCT

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/516,837

DATE: 12/17/2004  
TIME: 15:14:52

Input Set : A:\BTG0008-101(144404US01).SEQ.txt  
Output Set: N:\CRF4\12172004\J516837.raw

```

3 <110> APPLICANT: ISIS INNOVATION LIMITED
4     ANDERSON, Robert Paul
5     HILL, Adrian Vivian Sinton
6     JEWELL, Derek Parry
8 <120> TITLE OF INVENTION: THERAPEUTIC EPITOPES AND USES THEREOF
10 <130> FILE REFERENCE: 142769 / P035468WO
C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/516,837
C--> 13 <141> CURRENT FILING DATE: 2004-12-03
15 <150> PRIOR APPLICATION NUMBER: GB 0212885.8
16 <151> PRIOR FILING DATE: 2002-06-05
18 <160> NUMBER OF SEQ ID NOS: 758
20 <170> SOFTWARE: SeqWin99, version 1.02
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 7
24 <212> TYPE: PRT
25 <213> ORGANISM: Artificial Sequence
27 <220> FEATURE:
28 <223> OTHER INFORMATION: peptide
30 <400> SEQUENCE: 1
31 Pro Gln Pro Glu Leu Pro Tyr
32 1           5
34 <210> SEQ ID NO: 2
35 <211> LENGTH: 17
36 <212> TYPE: PRT
37 <213> ORGANISM: Artificial Sequence
39 <220> FEATURE:
40 <223> OTHER INFORMATION: peptide
42 <400> SEQUENCE: 2
43 Gln Leu Gln Pro Phe Pro Gln Pro Glu Leu Pro Tyr Pro Gln Pro Gln
44 1           5           10          15
46 Ser
49 <210> SEQ ID NO: 3
50 <211> LENGTH: 266
51 <212> TYPE: PRT
52 <213> ORGANISM: Homo sapiens
54 <400> SEQUENCE: 3
55 Val Arg Val Pro Val Pro Gln Leu Gln Pro Gln Asn Pro Ser Gln Gln
56 1           5           10          15
58 Gln Pro Gln Glu Gln Val Pro Leu Val Gln Gln Gln Gln Phe Pro Gly
59           20          25          30
61 Gln Gln Gln Phe Pro Pro Gln Gln Pro Tyr Pro Gln Pro Gln Pro
62           35          40          45
64 Phe Pro Ser Gln Gln Pro Tyr Leu Gln Leu Gln Pro Phe Pro Gln Pro

```

pp 1-6  
Does Not Comply  
Corrected Diskette Needed

insufficient exploration-give source of genetic  
material- see item 11  
on Error Summary  
Sheet

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/516,837

DATE: 12/17/2004  
TIME: 15:14:52

Input Set : A:\BTG0008-101(144404US01).SEQ.txt  
Output Set: N:\CRF4\12172004\J516837.raw

65 50 55 60  
67 Gln Leu Pro Tyr Pro Gln Pro Gln Ser Phe Pro Pro Gln Gln Pro Tyr  
68 65 70 75 80  
70 Pro Gln Pro Gln Pro Gln Tyr Ser Gln Pro Gln Gln Pro Ile Ser Gln  
71 85 90 95  
73 Gln Gln Ala Gln  
74 100 105 110  
76 Gln Ile Leu Gln Gln Ile Leu Gln Gln Leu Ile Pro Cys Met Asp  
77 115 120 125  
79 Val Val Leu Gln Gln His Asn Ile Ala His Ala Arg Ser Gln Val Leu  
80 130 135 140  
82 Gln Gln Ser Thr Tyr Gln Leu Leu Gln Glu Leu Cys Cys Gln His Leu  
83 145 150 155 160  
85 Trp Gln Ile Pro Glu Gln Ser Gln Cys Gln Ala Ile His Asn Val Val  
86 165 170 175  
88 His Ala Ile Ile Leu His Gln Gln Lys Gln Gln Gln Gln Pro Ser  
89 180 185 190  
91 Ser Gln Val Ser Phe Gln Gln Pro Leu Gln Gln Tyr Pro Leu Gly Gln  
92 195 200 205  
94 Gly Ser Phe Arg Pro Ser Gln Gln Asn Pro Gln Ala Gln Gly Ser Val  
95 210 215 220  
97 Gln Pro Gln Gln Leu Pro Gln Phe Glu Glu Ile Arg Asn Leu Ala Leu  
98 225 230 235 240  
100 Gln Thr Leu Pro Ala Met Cys Asn Val Tyr Ile Ala Pro Tyr Cys Thr  
101 245 250 255  
103 Ile Ala Pro Phe Gly Ile Phe Gly Thr Asn  
104 260 265  
106 <210> SEQ ID NO: 4  
107 <211> LENGTH: 7  
108 <212> TYPE: PRT  
109 <213> ORGANISM: Artificial Sequence  
111 <220> FEATURE:  
112 <223> OTHER INFORMATION: peptide  
114 <400> SEQUENCE: 4  
115 Pro Gln Pro Gln Leu Pro Tyr  
116 1 5  
118 <210> SEQ ID NO: 5  
119 <211> LENGTH: 20  
120 <212> TYPE: PRT  
121 <213> ORGANISM: Artificial Sequence  
123 <220> FEATURE:  
124 <223> OTHER INFORMATION: peptide  
126 <400> SEQUENCE: 5  
127 Leu Gln Leu Gln Pro Phe Pro Gln Pro Gln Leu Pro Tyr Pro Gln Pro  
128 1 5 10 15  
130 Gln Ser Phe Pro  
131 20  
133 <210> SEQ ID NO: 6  
134 <211> LENGTH: 17

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/516,837

DATE: 12/17/2004  
TIME: 15:14:52

Input Set : A:\BTG0008-101(144404US01).SEQ.txt  
Output Set: N:\CRF4\12172004\J516837.raw

135 <212> TYPE: PRT  
136 <213> ORGANISM: Artificial Sequence  
138 <220> FEATURE:  
139 <223> OTHER INFORMATION: peptide  
141 <400> SEQUENCE: 6  
142 Glu Leu Gln Pro Phe Pro Gln Pro Glu Leu Pro Tyr Pro Gln Pro Gln  
143 1 5 10 15  
145 Ser  
148 <210> SEQ ID NO: 7  
149 <211> LENGTH: 17  
150 <212> TYPE: PRT  
151 <213> ORGANISM: Artificial Sequence  
153 <220> FEATURE:  
154 <223> OTHER INFORMATION: peptide  
156 <400> SEQUENCE: 7  
157 Gln Leu Gln Pro Phe Pro Gln Pro Glu Leu Pro Tyr Pro Gln Pro Glu  
158 1 5 10 15  
160 Ser  
163 <210> SEQ ID NO: 8  
164 <211> LENGTH: 17  
165 <212> TYPE: PRT  
166 <213> ORGANISM: Artificial Sequence  
168 <220> FEATURE:  
169 <223> OTHER INFORMATION: peptide  
171 <400> SEQUENCE: 8  
172 Glu Leu Gln Pro Phe Pro Gln Pro Glu Leu Pro Tyr Pro Gln Pro Glu  
173 1 5 10 15  
175 Ser  
178 <210> SEQ ID NO: 9  
179 <211> LENGTH: 5  
180 <212> TYPE: PRT  
181 <213> ORGANISM: Artificial Sequence  
183 <220> FEATURE:  
184 <223> OTHER INFORMATION: peptide  
186 <400> SEQUENCE: 9  
187 Gln Pro Gln Leu Pro  
188 1 5  
190 <210> SEQ ID NO: 10  
191 <211> LENGTH: 17  
192 <212> TYPE: PRT  
193 <213> ORGANISM: Artificial Sequence  
195 <220> FEATURE:  
196 <223> OTHER INFORMATION: peptide  
198 <400> SEQUENCE: 10  
199 Gln Leu Gln Pro Phe Pro Gln Pro Glu Leu Pro Tyr Pro Gln Pro Gln  
200 1 5 10 15  
202 Ser  
205 <210> SEQ ID NO: 11  
206 <211> LENGTH: 20

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/516,837

DATE: 12/17/2004

TIME: 15:14:52

Input Set : A:\BTG0008-101(144404US01).SEQ.txt

Output Set: N:\CRF4\12172004\J516837.raw

207 <212> TYPE: PRT  
208 <213> ORGANISM: Artificial Sequence  
210 <220> FEATURE:  
211 <223> OTHER INFORMATION: peptide  
213 <400> SEQUENCE: 11  
214 Leu Gln Leu Gln Pro Phe Pro Gln Pro Glu Leu Pro Tyr Pro Gln Pro  
215 1 5 10 15  
217 Gln Ser Phe Pro  
218 20  
220 <210> SEQ ID NO: 12  
221 <211> LENGTH: 5  
222 <212> TYPE: PRT  
223 <213> ORGANISM: Artificial Sequence  
225 <220> FEATURE:  
226 <223> OTHER INFORMATION: peptide  
228 <400> SEQUENCE: 12  
229 Pro Gln Leu Pro Tyr  
230 1 5  
232 <210> SEQ ID NO: 13  
233 <211> LENGTH: 12  
234 <212> TYPE: PRT  
235 <213> ORGANISM: Artificial Sequence  
237 <220> FEATURE:  
238 <223> OTHER INFORMATION: peptide  
240 <400> SEQUENCE: 13  
241 Gln Leu Gln Pro Phe Pro Gln Pro Glu Leu Pro Tyr  
242 1 5 10  
244 <210> SEQ ID NO: 14  
245 <211> LENGTH: 11  
246 <212> TYPE: PRT  
247 <213> ORGANISM: Artificial Sequence  
249 <220> FEATURE:  
250 <223> OTHER INFORMATION: peptide  
252 <400> SEQUENCE: 14  
253 Pro Phe Pro Gln Pro Glu Leu Pro Tyr Pro Gln  
254 1 5 10  
256 <210> SEQ ID NO: 15  
257 <211> LENGTH: 14  
258 <212> TYPE: PRT  
259 <213> ORGANISM: Artificial Sequence  
261 <220> FEATURE:  
262 <223> OTHER INFORMATION: peptide  
264 <400> SEQUENCE: 15  
265 Pro Arg Ala Pro Trp Ile Glu Gln Glu Gly Pro Glu Tyr Trp  
266 1 5 10  
268 <210> SEQ ID NO: 16  
269 <211> LENGTH: 16  
270 <212> TYPE: PRT  
271 <213> ORGANISM: Artificial Sequence

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/516,837

DATE: 12/17/2004

TIME: 15:14:52

Input Set : A:\BTG0008-101(144404US01).SEQ.txt  
Output Set: N:\CRF4\12172004\J516837.raw

273 <220> FEATURE:  
274 <223> OTHER INFORMATION: peptide  
276 <400> SEQUENCE: 16  
277 Ile Asp Val Trp Leu Gly Gly Leu Leu Ala Glu Asn Phe Leu Pro Tyr  
278 1 5 10 15  
281 <210> SEQ ID NO: 17  
282 <211> LENGTH: 17  
283 <212> TYPE: PRT  
284 <213> ORGANISM: Artificial Sequence  
286 <220> FEATURE:  
287 <223> OTHER INFORMATION: peptide  
289 <400> SEQUENCE: 17  
290 Pro Gln Pro Gln Pro Phe Pro Pro Glu Leu Pro Tyr Pro Gln Pro Gln  
291 1 5 10 15  
293 Ser  
296 <210> SEQ ID NO: 18  
297 <211> LENGTH: 9  
298 <212> TYPE: PRT  
299 <213> ORGANISM: Artificial Sequence  
301 <220> FEATURE:  
302 <223> OTHER INFORMATION: peptide  
304 <400> SEQUENCE: 18  
305 Phe Pro Gln Pro Gln Leu Pro Tyr Pro  
306 1 5  
308 <210> SEQ ID NO: 19  
309 <211> LENGTH: 9  
310 <212> TYPE: PRT  
311 <213> ORGANISM: Artificial Sequence  
313 <220> FEATURE:  
314 <223> OTHER INFORMATION: peptide  
316 <400> SEQUENCE: 19  
317 Phe Pro Gln Pro Gln Gln Pro Phe Pro  
318 1 5  
320 <210> SEQ ID NO: 20  
321 <211> LENGTH: 9  
322 <212> TYPE: PRT  
323 <213> ORGANISM: Artificial Sequence  
325 <220> FEATURE:  
326 <223> OTHER INFORMATION: peptide  
328 <400> SEQUENCE: 20  
329 Pro Gln Gln Pro Gln Gln Pro Phe Pro  
330 1 5  
332 <210> SEQ ID NO: 21  
333 <211> LENGTH: 12  
334 <212> TYPE: PRT  
335 <213> ORGANISM: Artificial Sequence  
337 <220> FEATURE:  
338 <223> OTHER INFORMATION: peptide  
340 <400> SEQUENCE: 21

The types of errors shown exist throughout the Sequence Listing. Please check subsequent sequences for similar errors.

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/516,837

DATE: 12/17/2004  
TIME: 15:14:53

Input Set : A:\BTG0008-101(144404US01).SEQ.txt  
Output Set: N:\CRF4\12172004\J516837.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:23; Xaa Pos. 1,2,3,4,5,6,7,10,11,12,13,14,15,16,17

Seq#:37; Xaa Pos. 2

Seq#:38; Xaa Pos. 2,3,4

Seq#:45; Xaa Pos. 3,5

Seq#:64; Xaa Pos. 2

VERIFICATION SUMMARY  
PATENT APPLICATION: US/10/516,837

DATE: 12/17/2004  
TIME: 15:14:53

Input Set : A:\BTG0008-101(144404US01).SEQ.txt  
Output Set: N:\CRF4\12172004\J516837.raw

L:12 M:270 C: Current Application Number differs, Replaced Current Application Number  
L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:379 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:23  
L:379 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:0  
M:341 Repeated in SeqNo=23  
L:593 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:37  
L:593 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:0  
L:613 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:38  
L:613 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:38 after pos.:0  
L:708 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:45  
L:708 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45 after pos.:0  
L:955 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:64  
L:955 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:64 after pos.:0